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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/454,316	12/03/1999	SHIEN-CHANG CHEN	49458	3580

7590 05/29/2002

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EXAMINER

JOHNSON, EDWARD M

ART UNIT	PAPER NUMBER
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1754

15

DATE MAILED: 05/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/454,316

Applicant(s)

CHEN ET AL.

Examiner

Edward M. Johnson

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 April 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4,6,8-10,14-16 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,6,8-10,14-16 and 20-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 4, 6, 8-10, 14-16, and 20-22 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. No positive support for the recitation, "with the proviso that the catalyst excludes transition metals other than palladium, tin and gold" was found in the original disclosure. It is also noted that the instant specification includes an Example wherein copper is used. Cadmium, bismuth, and aluminum are also disclosed. Applicant is invited to specifically point out where in the original disclosure support may be found for the amendment.

***Claim Rejections - 35 USC § 103***

Art Unit: 1754

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 4, 6, 8-10, and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartsch 4,158,737.

Regarding claim 1, Bartsch '737 discloses a catalyst comprising palladium metal as the main catalyst (see column 1, lines 10-15) in the range of 0.5 to 2.0% weight (see column 5, line 41), tin and mixtures of tin with other metals in the range of 0.05 to 0.6% weight as promoter (see column 5, lines 47-55), in combination with an alkali or alkaline earth metal compound (see abstract and column 3, lines 64-68), on the outer surface of a porous carrier (see column 3, line 25), being used in the process for producing allyl acetate (see abstract).

Bartsch '737 fails to disclose the proviso that the catalyst excludes transition metals other than palladium, tin, and gold.

It is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made to

Art Unit: 1754

exclude metals other than palladium because Bartsch '737 discloses the invention pertains to Group VIII noble metal catalyst such as palladium (see column 1, lines 10-12).

Regarding claim 4, Bartsch '737 discloses palladium (see column 5, line 29) in the range of 0.5 to 2.0% weight (see column 5, line 41).

Regarding claims 6 and 8, Bartsch '737 discloses tin and mixtures of tin with other metals in the range of 0.05 to 0.6% weight (see column 5, lines 47-55).

Regarding claims 9 and 10, Bartsch '737 discloses alkali or alkaline earth metal compound in the range of 0.5 to 10% weight (see column 5, line 45).

Regarding claim 14, Bartsch '737 discloses the alkali and alkaline earth metal carboxylates and the formates and acetates of sodium, potassium, and lithium (see column 5, lines 33-39).

Regarding claim 15, Bartsch '737 discloses potassium hydroxide, acetate, formate, and carboxylates (see column 5, lines 12-13 and 33-39).

Regarding claim 16, Bartsch '737 discloses alumina (see abstract).

5. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartsch 4,158,737 as applied to claim 1 above, and further in view of Sennewald et al. 3,655,747.

Bartsch fails to disclose impregnating and reducing in solution with amines, aldehydes, or hydrazines.

Regarding claim 20, Sennewald '747 discloses impregnating the carrier with palladium and promoter metals in oxidative state (see column 4, lines 15-20), then reducing the metals from an oxidative state into metallic state (see column 4, lines 23-25), impregnating the metallic state metals-supporting carrier with a solution of alkali or alkaline earth metal compounds (see column 4, line 30, and column 6, lines 12-15), and then drying (see column 4, lines 30-31).

Regarding claim 21, Sennewald '747 discloses hydrazine hydrate solution as reducing agent (see column 4, lines 23-24).

It is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the impregnation and reduction method of Sennewald '747 with the catalyst of Bartsch '737 because Bartsch specifies the use of Sennewald's method to impregnate a noble metal catalyst to a carrier (see Bartsch '737, column 5, line 28).

6. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bartsch '737 and Sennewald '747 as applied to claims 1 and 20 above, and further in view of Kronig et al. 3,822,308.

Bartsch and Sennewald fail to disclose carbon monoxide, hydrogen, or alkene as reducing agent.

Regarding claim 22, Kronig '308 discloses ethylene gas as reducing agent (see column 4, lines 29-31).

It is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the ethylene in Kronig '308 with the catalyst and method in Bartsch and Sennewald because Bartsch specifies the use of both Sennewald's and Kronig's method for impregnating noble metal catalysts to carriers (see Bartsch '737, column 5, lines 28-29).

#### ***Response to Arguments***

7. Applicant's arguments filed 4/22/02 have been fully considered but they are not persuasive.

It is argued that the Examiner appears to take the position that 85-99.9% of the catalyst by weight may be other metals. This is not persuasive because it is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made to exclude metals other than palladium because Bartsch '737 discloses the invention pertains to Group VIII noble metal catalyst such as palladium (see column 1, lines 10-12). The proviso is also new matter.

It is argued that the present invention provides supported oxacylation catalysts in which a mixture of palladium, gold and

Art Unit: 1754

tin are deposited together. This is not persuasive because It is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made to exclude metals other than palladium because Bartsch '737 discloses the invention pertains to Group VIII noble metal catalyst such as palladium (see column 1, lines 10-12). The proviso is also new matter.

It is argued that in contrast Bartsch teaches supported catalysts of palladium metal and an alkali metal acetate on an support. This is not persuasive because Bartsch discloses palladium metal as the main catalyst (see column 1, lines 10-15) in the range of 0.5 to 2.0% weight (see column 5, line 41), tin and mixtures of tin with other metals in the range of 0.05 to 0.6% weight as promoter (see column 5, lines 47-55), in combination with an alkali or alkaline earth metal compound (see abstract and column 3, lines 64-68), on the outer surface of a porous carrier (see column 3, line 25).

It is argued that thus Bartsch did not disclose either the specifically claimed oxacylation catalysts having a mixture of palladium, gold and tin excluding other transition metals. This is not persuasive because Bartsch discloses the catalyst being used in the process for producing allyl acetate (see abstract). Also, the proviso is new matter.

It is argued that the disclosures of Sennewald and Kronig fail to overcome the limitations of the Bartsch disclosures. This is not persuasive because Sennewald is relied upon for impregnation and reduction and Kronig is relied upon for ethylene gas. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

#### **Conclusion**

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated

Art Unit: 1754

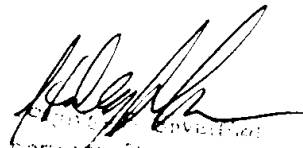
from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M. Johnson whose telephone number is 703-305-0216. The examiner can normally be reached on M-F 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 703-308-3837. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

EMJ  
May 24, 2002



Stanley S. Silverman  
Examiner/Supervisor  
Technology Center, DCU